

**Recommendations for USAID/Paraguay Environment Program
Proposed New Strategy FY2006-2011**

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Executive Summary

This report summarizes findings and recommendations from a review of USAID/Paraguay's Environment Strategic Objective (SO). The purpose of the review was to assess the mid-term progress achieved towards the current Environment SO, and to recommend changes for the SO for the period 2006-2011. The review is based on site visits, document reviews, and interviews with staff of environmental NGOs, government personnel at national and local levels, representatives of bilateral and multilateral donor agencies, and Mission staff.

In Paraguay, "green" environmental issues are of highest concern. These include deforestation for soy and livestock in globally and regionally significant ecoregions, illegal logging and hunting, watershed management, and soil conservation. The most critical issue in addressing these environmental challenges is the lack of a clear national environment policy and lack of national interest in environmental issues. As a result, the Environment Secretariat lacks budgetary resources and technical capacity to develop clear and enforceable policy and regulations.

The proposed new Environment SO builds upon the current program in ecoregional management by adding an enhanced focus on sustainable natural resource management. The program should continue to engage in national environmental policy reform and attempt to elevate environmental issues on the national political agenda. The review team recommends phasing out support to activities in the Pantanal, and focusing on the Chaco and Atlantic Forest regions. In the Chaco, the team recommends adopting a landscape approach, placing greater attention on forest clearance for pasture, fodder and road development. In the Atlantic Forest, the team recommends continuing conservation of the remaining forest fragments, with an enhanced emphasis on alternative income generation activities. Sustainable production should become a high priority in the new strategy, and a third IR is introduced to reflect this. The review team suggests a new emphasis on links with the Economic Growth, and the Democracy and Governance SOs. Cross-sectoral synergies between these and the proposed Environment SO exist already and should be strengthened. Finally, the team recommends simplifying the funding mechanisms and program management and proposes funding additional local NGOs in the Chaco. Illustrative activities provide guidance on how the proposed changes can be made.

The success of the proposed environment program will depend on several critical assumptions, among them that the program will receive healthy funding; that the efforts of dedicated, capable local NGOs to engage in conservation efforts and to influence debate on national environmental policies will continue; that political will for conservation will eventually be generated; that the GOP will not renege on its environmental commitments; and that regional coordination with neighboring USAID missions will increase.

USAID/Paraguay's comparative advantage in the natural resource management sector is its strong working relations with highly capable NGOs who are not only addressing Paraguay's environmental challenges, but are also building government capacity for sustainable natural resource management. As a result, the Mission is making significant progress in addressing key environmental challenges with which other donors have had limited success in the past. To prepare for the new strategy, a variety of assessments, workshops, and site visits are proposed.

Introduction

This report summarizes findings and recommendations from a review of USAID/Paraguay's Environment Strategic Objective 2001-2005. The purpose of the review was to assess the mid-term progress achieved towards the current Environment Strategic Objective, and to recommend changes for the Strategic Objective for the period 2006-2011. An assessment of findings, achievements, and recommendations for the current Environment program are discussed in detail in a separate report; a summary of the major findings, on which recommendations for the next Environment strategy are based, is presented herein as a prelude to the proposed new SO.

Paraguay's Environmental Challenges and Priorities

Team members consulted with staff of environmental NGOs, government personnel at national, departmental, and municipal levels, and representatives of bilateral and multilateral donor agencies to assess perspectives on Paraguay's environmental challenges. A consensus emerged as to the nation's most pressing priorities. Almost all respondents felt strongly that the most critical challenge was the lack of a clear national environment policy. The Government of Paraguay places little emphasis on environmental issues, and the environment is simply not prominent on the national agenda.

As a result, the Environment Secretariat (SEAM) is ineffective and at times obstructionist, lacking budgetary resources, technical expertise, and the political will to develop clear and enforceable policy and regulations. SEAM's institutional weakness means that many donors, NGOs, and local governments are struggling to achieve the goals of protected area and biodiversity conservation projects without national support.

"The problem is that there is no environment policy. The new government still isn't focused on the environment sector. We don't have a policy, just *ad hoc* decisions to meet minimal requirements of the law."

"There is no political will to be proactive about planning. Rather, they [the government] are reactive to problems in the countryside."

- Two donor representatives

Apart from this institutional challenge, environmental priorities cited by respondents are "green" issues, including deforestation, illegal logging and hunting, watershed management, and soil conservation. "Brown" environmental issues, such as sewage, waste-water management, and garbage disposal, were not mentioned (although USAID/Paraguay's Democracy and Governance program works with municipalities on these issues). Land conversion to large-scale soybean farms in eastern Paraguay, and resulting loss of biodiversity, loss of water quality, and creation of social conflict between large landowners, smallholders, landless campesinos, and indigenous groups, is the most critical threat to the Atlantic Forest ecoregion. Similarly, forest clearing for pasture and fodder production in the Chaco, which results in desertification, salinization, loss of biodiversity, and adverse effects on water quality and quantity, is the most pressing environment

issue in that ecoregion. These problems are likely to be exacerbated by the proposed Bi-oceanic corridors (roads) through the Chaco. Several respondents, particularly governors of affected departments, expressed concern that the environmental and social impacts of these roads will not be properly mitigated, and will contribute to further deforestation along the roads and immigration of Brazilian ranchers and cattle.

Watershed management, including protection of critical headwaters, effects on water quality of agrochemicals, sedimentation of waterways on which are located Paraguay's major dams, and the effects on large aquifers of deforestation, is emerging as a focal issue in Paraguay. Several donors (JICA, WB, EU) are proposing or beginning large new projects on aquifer conservation, health of major waterways, and safe drinking water. Others (e.g., GTZ) are now focusing on soil conservation and sustainable agricultural production. Major donor initiatives in the environment sector that address these priority issues are discussed further in the section below on other donors.

Review Methodology

This review is based on site visits, interviews, and document reviews. Team members visited Defensores de Chaco National Park, Loma Plata, and Filadelfia in the Chaco region and San Rafael Resource Management Reserve in the Upper Paraná Atlantic Forest (UPAF) Region. During these visits, team members visited protected area sites and observed first-hand some of the challenges these sites are facing, including deforestation, poaching, and the insertion of campesino settlements into protected areas. The team also met with implementing partners, private parks guards, local government officials, community leaders, and a Peace Corps volunteer to discuss ongoing activities, develop on-the-ground perspectives on the contribution of USAID-funded programs, and learn about the impact of these activities.

In Asunción, the team conducted qualitative interviews with NGOs directly and indirectly supported by USAID/Paraguay, central government officials at the Secretaría del Ambiente (SEAM- protected area division of Environment Secretariat), GEF Coordinator for SEAM, Coordinator of IDB-funded SEAM Institutional Strengthening Project, and local government officials for the Department of Alto Paraguay, the Department of Bóqueron, and the Municipalidad de Mariscal Estigarribia. Interviews were conducted with other donors funding environmental programs in Paraguay, including GTZ, EU, JICA, CIDA, and UNDP. Finally, interviews were conducted at the Paraguay Mission with the program officers for the Economic Growth and the Democracy and Governance Programs. A complete list of individuals interviewed is in Appendix 1.

Interviews did not utilize a questionnaire or a predetermined set of questions. Rather, team members listened to summaries of work plans, objectives, and governmental concerns, and followed up with questions about interviewees' opinions on Paraguay's most pressing environmental problems, their assessments of their own achievements, their opinions of USAID's successes and failures, and their views about where and how USAID should focus its efforts in the future. The team also reviewed implementing partner work plans, previous evaluations, annual and semi-annual reports, government environment documents, the World Bank country strategy, informational materials provided by NGOs, reports of other donors, and relevant Mission documents.

Findings on Progress of Current Environment SO

- Accomplishments of the Environmental SO are significant for the amount of funds invested. USAID/Paraguay is filling an important niche in natural resource conservation that is not supported by other donors.
- USAID/Paraguay is making an enormous impact on local NGO strengthening and capacity building. This is another niche that is being filled only by USAID and not by other environment donors in the country. NGO capacity building has yielded results in adaptive management, ability to obtain new sources of funding, development of technical expertise, and coordination of efforts in project implementation.
- Partner NGOs are working to strengthen the central government, in particular SEAM, created in 2000. Despite their efforts, progress in working with the central government has been very slow, due to the central government's (and especially SEAM's) lack of resources and technical capacity.
- Partner NGOs are also working to implement SEAM's directive that environmental management be devolved to local governments. Several have developed good links with departments and municipalities and are engaged in capacity building, institutional strengthening, and stakeholder participation activities such as land use planning.
- NGOs are developing a variety of environmental education materials to raise awareness and build constituency for conservation at the national level.
- TNC and its local partners have developed a good working relationship with IBR (Instituto de Bienestar Rural), a government ministry that has in the past sold lands under Protected Areas status, and moved campesino communities into Protected Areas.
- In UPAF, the established mix of forest protection, education, public awareness campaigns, capacity building activities for local government officials, research, work with campesino and indigenous communities, and work with large soy producers, is appropriate to achieve the SO goals. It is too soon to evaluate IDEA's work in the Northern Block of UPAF. However, the proposed activity is appropriate.
- WWF is playing a valuable role as an umbrella or coordinating organization and as "keeper of the vision" for the UPAF. WWF efforts led to the completion, publication, and dissemination of the UPAF Biological Vision. Capacity building of local NGOs has been highly successful in the region. In the San Rafael Resource Management Reserve, an NGO collaboration led to the establishment of the Alianza de Conservación (Alliance for Conservation).
- Continued emphasis on private conservation measures, including the creation of private reserves is needed. Success of conservation easements is not yet clear. The mechanism of *usufructo*, although expensive, is successfully protecting forests in San Rafael. Land purchase by the Alianza de Conservación is an appropriate and successful part of the overall strategy for countering threats to biodiversity.
- Success of the Environment SO in strengthening government and civil society in the Chaco and Pantanal regions has been noteworthy. However, progress on the overarching ecoregion conservation objective of the SO has been less significant due to inadequate attention being paid to the larger ecoregional threats of forest clearing for pasture and fodder production.
- TNC has been engaged in ecoregional planning for the tri-national Chaco region and for the Pantanal. TNC is also providing institutional development and technical training

opportunities to Paraguayan professionals. With support from TNC, IDEA conducted a workshop promoted cross-border collaboration in planning, training, and other activities important for integrated conservation of the Chaco ecoregion.

- With USAID support, DeSdel Chaco has made significant progress in the region. DeSdel Chaco led the development of a 5-year conservation action plan for the Chaco and the Pantanal ecoregions. DeSdel Chaco is working to acquire Ramsar recognition of several wetlands areas in the Chaco, and has been instrumental in developing a consortium of private land owners and for developing management plans for Mennonite cooperative-owned areas in Río Yacaré Sur system. DeSdel Chaco has developed educational programs on governance, organizational development and environmental issues, and is actively working to strengthen local governments and municipal environmental secretariats (SEAMs) to proactively address regional environmental concerns.
- Under USAID's Parks in Peril (PiP) program, DeSdel Chaco led conservation efforts in the Defensores de Chaco National Park (DChNP), including working with the government to transfer title of lands from IBR to SEAM. TNC is also financing the purchase of a corridor between Defensores Chaco National Park and the nearby Cerro Guaraní National Park. Progress of the PiP program is, however, being undermined due to lack of support from SEAM and lack of coordination with UNDP/GEF.
- Bi-Oceanic corridor roads are likely to accelerate land conversion in the Chaco.
- In the Pantanal, TNC is using USAID support to implement a number of activities, including ecoregional planning for the Pantanal, establishment of a conservation group, initiation of environmental education activities, and establishment of small-enterprise development activities.

Proposed New Environment SO: Management of natural resources and globally important ecoregions improved

The proposed new Environment Strategic Objective builds upon the current program in ecoregional management by adding an enhanced focus on sustainable natural resource management. As with most natural resources programs, the nature of the SO requires a long-term commitment to be successful. The SO maintains its emphasis on building the capacity of local NGOs to manage critical ecoregions. It continues to prioritize the development of policy, legal and financial tools for improved ecoregional management. The program also encourages partners to continue to work at the department and municipal levels with local governments, while simultaneously influencing the national policy dialogue on environment.

New elements of the program are specific to the two ecoregions the review team recommends that the mission continue to focus on: the Chaco and the Atlantic Forest. We recommend discontinuing support for work in the Pantanal ecoregions (see below for an explanation).

Management of natural resources and globally important ecoregions improved

- IR 2.1** Ecoregional management capacity of local NGOs strengthened
- IR 2.2** Policy, legal, and financial tools for improved ecoregional management developed
- IR 2.3** Sustainable management of natural resources promoted

In the Chaco, the team believes that implementing partners should adopt a landscape approach, focusing on the critical threats to the ecoregion. These threats are forest clearance for the creation of pasture and the production of fodder crops, and the impact of new road construction, which will in turn lead to greater deforestation. Protection of achievements in previously-established national parks, including Defensores del Chaco National Park through adequate staffing, infrastructure, and funding is another top priority for the region. The team suggests that the Mission focus its efforts on addressing these threats, rather than diluting its efforts by engaging in activities that address regional issues of secondary importance. Finally, the review team suggests that the Mission invest in capacity building to enhance additional local NGOs working in the region, so that these organizations may be able to address some of the secondary issues, such as the creation of private reserves, that are currently handled by DesDel Chaco.

In the Atlantic Forest, conservation of remaining “core” forest fragments as identified in WWF’s Biological Vision of the Upper Paraná Atlantic Forest continues to be the highest priority. Support for partners engaged in establishing novel private measures of conservation should continue, as should support for private parks guards who are protecting already established (at least on paper) reserves. The review team believes that sustainable production in the buffer zones around core forests should become an even higher priority than it is currently.

The greatest threat to the Atlantic Forest is large-scale clearing for soybean plantations by large landowners. This activity forces campesinos into ever-shrinking parcels of forest, often in areas that are designated as protected. Inevitably, these marginalized communities are forced to obtain animal and plant resources in an unsustainable manner from protected forests. To mitigate this pressure on protected areas, the review team suggests that the Mission encourage partners to expand their efforts to develop alternative sustainable production activities. Since many conservation organizations lack in-house knowledge of such business development enterprises, the Mission should encourage alliances between existing USAID partners and other NGOs who specialize in this type of activity. The Mission should also encourage alliances with the private sector, particularly with existing agricultural or forest product businesses with a strong conservation ethic. As a complement to these efforts, the Mission should continue to fund the environmental outreach and education activities of partners, especially in campesino communities. The team recommends that the Mission also support the ongoing efforts to engage in dialogue with soy producer cooperatives on the development of economic incentive for conservation, and should

In the Atlantic Forest, conversion of forested land to soybean plantations has led to the highest deforestation rate in South America. Since 1961, soybean cultivation has expanded from 1,300 hectares to 1.2 million hectares. Forest conversion by large landowners places pressure on smallholders, who are squeezed into smaller, less fertile plots of forest, often at the margins of or inside designated protected areas. Often under official colonization programs, small farmers clear their plots and sell the timber for an initial profit, then turn to subsistence farming. Years of cultivation of marginal lands with poor techniques and little access to extension services leads to declining fertility and agricultural yields. No longer able to support themselves, small farmers sell their land to larger landholders, then move on to a new forested plot.

consider expanding efforts to study the effects of large-scale soy production (and concomitant deforestation) on eastern Paraguay's major watersheds.

The review team also made several findings concerning funding mechanisms and management of the Environment program. Currently, the Mission supports two local NGO partners directly, while also buying into two global agreements managed in Washington that fund two large US-based conservation NGOs. These large organizations in turn fund several local Paraguayan partners, including the two that are also supported directly by the Mission. The result is a great deal of confusion about exactly which "pot" of money is supporting specific activities and a lack of clarity on partners' responsibilities to account for and report on specific activities (a critique that was also offered by evaluators of WWF's program in 2001). The team has several suggestions to simplify this situation. First, we recommend that funding to US-based conservation NGOs be reconsidered due to their large overhead (17-22%) and high operating costs. It is true that the large international NGOs are serving a useful function as umbrella organizations that help coordinate complementary activities of multiple partners, particularly in the Atlantic Forest region. We feel, however, that this function could be achieved through coordinated meetings attended by all partners working in a particular region. Instead, the team recommends that the Mission consider funding regional consortia of NGOs that will be led by local NGOs. These consortia could potentially include the large US-based NGOs if the consortia members so desired. Thus, we envision groups of NGOs committed to working in the same geographic region jointly applying for mission funds for regional activities. Several of the local NGOs that have been cultivated by the mission are capable of administering such funding directly. Moreover, the experience would contribute directly to the first IR (building capacity of local NGOs).

Specific Recommendations for New Environment SO

These recommendations are in rank order of importance. However, it should be noted that even at current levels of funding, most, if not all, of these recommendations could be adopted.

- Continue to support conservation NGOs in their current efforts in protected area activities, community outreach and environmental education, and local government capacity building. USAID is a very effective donor, and its approach to development through direct funding of NGOs rather than government ministries has achieved tangible and lasting results in conservation.
- Continue to support NGO efforts to develop and seek legal recognition for private conservation measures, including private reserves, conservation easements, and usufruct agreements. Encourage partners to explore co-management agreements for public protected areas. The co-management scheme can be government-NGO, government-indigenous community, or public-private.
- Support development of sustainable production systems. For instance, support sustainable forest management activities, organic soy smallholders, payments for environmental services, certified products, and non-timber forest products. Encourage partnerships with the private sector to leverage funds and business expertise. Tap into WWF's Global Forest and Trade Network to explore support for producer group formation and training.

- Currently, few organizations are working in the Chaco, however, the threats to forest conservation in the region are enormous. The Mission should support strengthening of other local NGO(s) in the Chaco, following the Fundación Moises Bertoni (FMB) model for the Atlantic Forest region. Capacity building of additional NGOs would allow for adequate coverage of the many issues DesdelChaco is currently addressing in the region.
- Continue to engage in national environmental policy reform and elevate environmental issues on the national political agenda. Although these engagements seem to have been ineffective to date, most other donors viewed the need for USAID to engage with SEAM as critical. Begin to engage with IBR, particularly regarding the colonization program that settles “landless” campesinos in forested areas. This program is a major and official catalyst for deforestation in eastern Paraguay.

Paraguay’s system of land tenure is one of extreme inequity. Eighty two percent of rural properties are less than 1 hectare, and only 1% of landowners have farms larger than 1,000 hectares. Yet, that 1% owns 77% of all cultivated land.

- Discontinue support to Pantanal work. Only fifteen percent of the Pantanal ecoregion lies in Paraguay, and a significant portion of the Paraguayan Pantanal is owned by a TNC board member. The threat to the Paraguayan Pantanal appears much less immediate compared to the Atlantic Forest and the Chaco regions. Funding for Pantanal work currently being provided to TNC and DesdelChaco should be redirected to the Chaco region.
- Emphasize links with other SOs, including the Economic Growth SO and the Democracy and Governance SO. Illustrative activities (described below) include potential synergies with the existing EG business development program (*Paraguay Vende*), and existing DG work on support to municipalities for land use planning and building local capacity for environmental management.
- Consider support to NGOs as they seek funding for land purchases in the Atlantic Forest region, alongside other activities that partners are already engaged in. Given the high deforestation rate in the region, land purchase provides the most immediate protection from land degradation due to expanding soy cultivation and poor farming practices.
- Coordinate with UNDP/GEF in its efforts to build SEAM’s institutional capacity. GEF’s current \$8 million project to protect four areas in Paraguay and develop the national protected areas system (SINASIP) has been ineffective due to SEAM’s lack of technical capacity and lack of clear policies and regulations for public and private protected areas. If GEF continues to work in Paraguay, assist conservation NGOs to access GEF funds and implement GEF activities.

Illustrative Activities

- To develop a new model for grazing in Chaco forests, conduct exchanges with the Centro de Zoología Aplicada, University of Córdoba, Argentina, regarding its model for grazing and sustainable use of natural Chaco forests, and its potential for application in the Paraguayan Chaco. Promote the use of this model, which uses natural forest grazing rather than deforestation for pasture and fodder production, with appropriate organizations and land owners in Paraguay. Visit a site where rotational grazing has been successful. Visit GTZ-supported alternative fodder production projects in Chaco. Offer local NGOs opportunities for training in sustainable grazing methods and sustainable fodder production.
- To broaden the base of partners supported by the Mission in the Chaco, identify and collect information on local conservation NGOs that have a natural resource management emphasis.
- Organize regional or thematic meetings of donors and implementing partners to share information, coordinate plans, and pool resources. Rather than the existing system of round table meetings for all environment sector donors, these meetings would center around groups of donors and partners working in a particular region (such as San Rafael, or the Chaco) or around particular issues (such as working with SEAM, or working to influence the outcome of the national environmental strategy).
- Visit sites where co-management of a park or protected area has been successful (probably Bolivia). Organize a workshop and conduct training on how to implement a co-management scheme. Develop a successful proposal to the public or private sectors for the co-management of a priority protected area in the Chaco and proceed with co-management plans.
- To develop greater synergy between the Environment and Economic Growth programs, one of the alternative income-generating activities already proposed by implementing partners, such as organic soy production (Alter Vida), organic shade-grown mate (Guyra), forest-based arts and crafts from indigenous or campesino communities (ProCosara, IDEA), naturally managed organic palmito (private sector), or nature-based tourism activities can become a client of *Paraguay Vende*, and receive business skill development training and marketing assistance.
- To develop greater synergy between the Environment and Democracy/Governance programs, conduct joint strategic planning sessions at the local government level to set priorities for sustainable development. This could be done in key areas with compatible methodologies already being used by Altervida and local government organizations. Strengthen department and municipal SEAM units in their role to carry out local development strategies and priorities, as well as decentralized environmental responsibilities including compliance, mitigation, and monitoring.
- Encourage local conservation NGOs (especially in the Chaco) to apply for the Democracy and Governance SO sub-grant program for NGO strengthening, to receive better training in advocacy, government oversight, and promotion of government reform.

- Investigate local models of private-sector sustainable forest management for potential scaling-up. We are aware of two such models in Paraguay: Guayaki Rainforest Product's production of organic, shade-grown mate by indigenous communities (Itabo Reserve and Ache Guayaki lands), and Estancia Golondrina's certified timber harvesting and sustainable soy, corn, and cotton farming (Ypeti Reserve). We recommend that the Environment and EG program directors jointly visit these enterprises to observe their operations, learn about their business plans, and to meet with owners to discuss their profitability and potential for scaling-up.

Transition from Current Program

- Shift from protected area focus to landscape conservation issues in the Chaco to effectively address the largest environmental threat in the region, namely land conversion from forest to pasture that is leading to loss of biodiversity, soil loss, soil compaction, depletion of ground water and desertification in that region.
- Placement of greater emphasis on sustainable forest management in the Atlantic Forest and the Chaco to address land conversion for livestock feed and pasture. This shift in focus will address work in sustainable use zones around protected areas, and in corridors between reserves.
- Discontinuation of support for work in the Pantanal.
- Development of stronger linkages with the Economic Growth and Democracy/Governance programs.
- Build stronger links with UNDP/GEF programs in Paraguay.
- Reconsideration of support to US NGOs due to the large overhead costs, and the need to strengthen local NGOs.
- Provision of funding to another local NGO in the Chaco, or provision of support to TNC strengthen another local NGO.

Critical Assumptions

- Dedicated, capable local NGOs will continue their efforts to engage in conservation efforts, and to influence debate on national environmental policies.
- Legal basis for enforcement will continue to hold, that government (central and local) capacity in delivering services and performing their functions will improve in time, and political will for conservation will eventually be generated.
- GoP will not renege on environmental commitments by revoking decrees establishing public protected areas (as occurred recently for Medanos National Park) or private reserves.
- 4. USAID Paraguay's environment programs will receive healthy funding.

- 5. Regional coordination occurs with neighboring USAID missions: USAID Brazil and Bolivia all have environmental programs with strategic objectives very similar to Paraguay's. Many of the ecosystems in which USAID/Bolivia works run across political boundaries. It will be critical for the success of Paraguay's programs as well as its neighbors' to closely coordinate and collaborate with each other to gain economies of scale, and build on each others' successes. A regional environmental framework will help strengthen each country's own program

Other Donor Activities in the Environment Sector

There is a general trend away from funding of large environment programs because of failures related to SEAM's lack of capacity. Instead, donors are now focusing on poverty reduction and enterprise development programs. Two donors continue to provide institutional support to SEAM (IDB and GEF/UNDP), although it now appears that GEF may be terminating its project this year due to lack of cooperation from the government.

New programs in the environment sector are restricted to watershed management and soil conservation programs. The review team's decision not to recommend that the Environment program focus on water and watershed management issues is due in large part to the fact that several other donors are funding major new projects in this sector. JICA plans to begin support for watershed management in critical areas, aquaculture, toxics in drinking water, and possibly water and agrochemicals. The World Bank has proposed a large project for conservation of the Guaraní aquifer. The purpose of the project is to maintain a sustainable supply of safe water for human consumption, high-quality water for industry, and a sustainable supply of thermal water for tourism, industrial, and municipal uses. The European Union is supporting a study of the tri-national Pilcomayo River basin, with the goal of assessing the river for sustainable use (in part for drinking water). However, because of delays in implementation of this program, the EU is considering withdrawal of its support. In soil conservation, GTZ supports sustainable and organic smallholder production of high-value agricultural products and promotes development of no-tillage cultivation strategies.

Other sectoral foci include micro-enterprise development (e.g., World Bank's PARN project) and environmental education (UNDP, GTZ). Donors are also considering moving away from direct support to national government ministries to partnerships with NGOs and local governments.

Small amounts of funds have been directed to Protected Area management by other donors. For instance, bilateral support from the Spanish government supported ecotourism studies in the San Rafael region. The French government has supported conservation efforts in Mbaracayu. And, part of the European Union ProdeChaco funding has been allocated to the management of Defensores del Chaco National Park. However, these investments have been small and short-term.

Rationale for USAID Involvement

USAID is one of the few donors funding natural resource management and conservation programs. Environmental services such as natural forests' provision of water resources,

prevention of sedimentation of reservoirs, availability of non-timber forest products (NTFPs), tourism opportunities and climate regulation have been ignored by the GoP and many donors. GEF is the largest supporter of natural resource management and conservation; however, as noted above it is not very effective and its activities may be ending this year as a result.

A major environment challenge in Paraguay is related to water. According to the World Bank, Paraguay has the largest per capita quantity of water in South America, but the lowest percentage of people with access to proper sanitation and to safe drinking water (a problem especially in the Chaco). Little is known about pollution of water due to agriculture in Paraguay. USAID/Paraguay already has a presence in this sector, since the Democracy and Governance program is supporting activities on urban and rural water access and management. The team recommends that in preparation for the new Environment SO, a review of the current state of knowledge on environmental impacts of soy production, especially impacts of agricultural chemicals on water, be undertaken (see section below on methodology for new strategy preparation).

In focusing efforts in the Chaco and the Atlantic Forest regions, the Environment program addresses not only conservation of forests and globally significant ecoregions, but also other important environment challenges in the country such as building government capacity for sustainable natural resource management, assistance to central governments in devolving environmental management responsibilities to departments and municipalities, preventing land conversion to soy and pasture and hence soil conservation, mitigating impacts of road development in the Chaco, and curbing wildlife hunting and trade and reduction in illegal logging.

USAID's comparative advantage in working on natural resource management is the strong working relations with highly capable NGOs who are not only addressing the environmental challenges discussed above, but also working to strengthen government capacity in achieving national conservation objectives, primarily elaborated in the National Environmental Policy being prepared by SEAM and the National Strategy and Plan of Action for the Conservation of Biodiversity (ENPAB).

- ✓ *The Paraguayan Government considers the Chaco ecoregion to be its highest conservation priority.*
- ✓ *Defensores del Chaco National Park contains more than 84% of the species with high economic value in Paraguay.*
- ✓ *In the Atlantic Forest, 40% of all plants, 42% of terrestrial vertebrates, 52% of trees, 74% of bromeliads, 80% of primates, and 92% of amphibians are endemic species.*
- ✓ *In San Rafael Resource Management Reserve, 378 bird species (half of all species found in the country) have been identified, including 11 endangered species, 17 threatened species, and 70 endemic species.*

Cross-Cutting Issues

Democracy and Governance

The Democracy and Governance program's strategic goals are effective local governments, an active civil society, and an expanded national democratic reform process. The goals of the

current Environment program also include local government capacity building, support of local conservation organizations, and civil society participation in government policy-making. Like the Democracy and Governance program, many of the activities of the Environment program function at the level of department or municipality. For example, conservation organizations such as DesdelChaco (supported by the Environment program) provide training to local governments in land use and conservation planning. Similarly, the Democracy and Governance program supports groups such as Alter Vida (also a conservation organization) to provide technical assistance in land use and zoning to municipalities. The Democracy program's work on tax reform supporting decentralization of tax revenue collection allows municipalities access to resources they may not receive from the national government. These resources in turn can be used to fulfill the environmental management responsibilities devolved upon local governments by SEAM.

While the Environment program focuses primarily on "green" issues, such as biodiversity conservation, protected area management, and sustainable natural resource use, the Democracy and Governance program engages on "brown" issues, including sanitation, sewage, and water systems. Synergy occurs in the area of drinking water. The Environment program supports groups such as Alter Vida and Natural Land Trust in creation of private forest reserves that protect headwaters of important streams, while the Democracy and Governance program works with rural community groups to manage their well-based drinking water systems.

Economic Growth

The goal of the Economic Growth sector's *Paraguay Vende* program is to increase private sector sales and generate employment in three regions of eastern Paraguay. These regions are closely aligned with the areas of the Atlantic Forest where the Environment program is working. Firms participating in the program receive technical assistance in business development and marketing that will generate increased sales and lead to greater employment in these regions. Currently, the program works with companies producing stevia, wood, herbs and spices, tilapia, tea, and sesame seeds. With one exception, all of these are agricultural or forest products. While the implementing contractor for the program evaluates these companies for compliance with air, water, and soil quality, as well as labor standards, no assessment of the sustainability of the harvest of these natural products is made. To develop closer links between the Environment and Economic Growth programs, we recommend that evaluators ensure that sustainable production best practices are followed.

Many of the Environment program's implementing partners are implementing or beginning to explore development of sustainable economic alternatives in the buffer zones around public and private reserves. Examples include Alter Vida's work on smallholder production of organic soy in buffer zone around Yvytyrusu Reserve, WWF's proposal to promote certified palmito and/or yerba mate production in Itabo Private reserve, IDEA's plan to develop a pilot project for sustainable production in the buffer zone of the Northern Block of UPAF, and Guyra Paraguay and Guayaki Rainforest Products' discussion of partnering to scale up organic shade-grown mate production in the buffer zone around Mbaracayu. These producers would benefit from technical assistance provided by Paraguay Vende in sustainable agriculture and forest management, development of organic and NTFP standards, business development, and marketing.

Recommended Methodology for Developing New Environment Strategy

- ✓ Conduct a complete Forestry and Biodiversity Assessment for USAID/Paraguay's new strategy as required by FAA Sections 118 and 119.
- ✓ Carry out a national environmental education and communication assessment.
- ✓ Conduct a review of the IDB road project, the associated EIA, and follow-up with USAID/EGAT's Leslie Johnston for assistance.
- ✓ Communicate with JICA as it prepares a new study of the forestry sector, and review its findings and other literature on species, production options, market conditions, exports and imports, technology for processing, etc.
- ✓ Participate in the upcoming workshop organized by IDEA and WWF on soy sustainability impact assessment. Complement this workshop with a review of literature on agricultural pollution and other environmental impacts of large-scale soy production.
- ✓ Carry out an RFA for the Environment SO (perhaps one for Chaco and another for UPAF) at the beginning of the strategic plan period.
- ✓ Look into using Brazil as a model for development of -partner coalitions as part of the RFA, and emphasize partner matching as a significant selection criterion.
- ✓ Continue to coordinate and engage USAID/Washington-funded programs from LAC and EGAT, and to coordinate and engage neighboring missions (USAID/Bolivia and USAID/Brazil). As the Environment SO is relatively small, and as the Chaco and UPAF ecoregions are shared with neighboring countries, the more coordination, collaboration and synergies the mission can develop, the better.
- ✓ Conduct a pre-award survey to assess which local NGOs should be considered for direct USAID funding.
- ✓ find out about IQCs available for strategy development team.
- ✓ Undertake a basic market study of organic soy production and other organic or sustainable NTFFPs or agricultural products, such as organic sugar cane.
- ✓ Make visits to projects in the region where sustainable forest management and alternative income generating activities are ongoing (such as Brazil's shade-grown mate growers).

Appendix 1

Acronyms

ASCIM	Association of Indigenous-Mennonite Cooperation Services
CI	Conservation International
CICOAM	Centro Internacional de Capacitacion para Organizaciones Ambientalistas y de Desarrollo
CIDA	Canadian International Cooperation Agency
DChNP	Defensores del Chaco National Park
DeSdel Chaco	Fundacion para el Desarrollo Sustentable del Chaco
DG	Democracy and Governance
EG	Economic Growth
Enlace	Fundacion Enlace
ENPAB	National Strategy and Plan of Action for the Conservation of Biodiversity
EU	European Union
FMB	Foundation Moises Bertoni
GTZ	German Technical Cooperation
GOP	Government of Paraguay
IBR	Instituto de Bienestar Rural (Institute for Rural Welfare)
IDB	Inter-American Development Bank
IDEA	Instituto para el Derecho y Economia Ambiental
IR	Intermediate Result
JICA	Japan International Cooperation Agency
PiP	Parks in Peril
Pro Cosara	Asociacion Pro Cordillera San Rafael
SEAM	Environment Secretariat
SINASIP	Strategic Plan for the National System of Protected Areas
SO	Strategic Objective
TNC	The Nature Conservancy
UNDP/GEF	United Nations Development Program/Global Environmental Facility
UPAF	Upper Parana Atlantic Forest
WCS	Wildlife Conservation Society
WWF	World Wildlife Fund

Appendix 2

List of Contacts

Alberto Yanosky, Guyra Paraguay
Oscar Camé, SEAM - IBD program coordinator
Erasmus Rodriguez, Governor of Alto Paraguay
Lucy Aquino, WWF
Walter Biedermann, WWF
Phil Hazelton (Consultant with WWF)
Alberto Villalba, TNC-Paraguay
Victor Gonzales, SEAM – Protection and conservation of the biodiversity
Frank Fragano, SEAM - GEF Project
Wilfried Giesbrecht, Fundacion para el Desarrollo Sostenible del Chaco
Eduard Boschmann, Asociación de Servicios de Cooperación Indígena – Mennonita (ASCIM)
David Sawatsky, Governor of Boqueron Department
Humberto Ratzlaff, Intendente Municipal, Municipalidad de Mariscal Estigarribia
Christine Hostettler, Pro Cosara
Jeffrey xxx, Peace Corp volunteer
Patricia Abed de Vera, Instituto de Derecho Y Economia Ambiental (IDEA)
Jesus Quintana, IDEA
Nancy Cardozo, Fundacion Moises Bertoni (FMB)
Genoveva Ocampos, Canadian International Development Agency (CIDA)
Andres Molina Lopez, Japan International Cooperation Agency (JICA)
Kenji Yamamoto, JICA
Mikio Tokunaga, JICA
Agnes Bartholomaeus, German Cooperation Agency (GTZ)
Daniel Vasconsellos, European Union
Carlos Benitez, UNDP
Victor Benitez, Altervida
Alex Uriate, Economic Growth, USAID
Steve Marma, Democracy and Governance, USAID
Ana Maria Sienra, Natural Land Trust Paraguay
Alex Pryor, Guayaki Rainforest Products

Appendix 3

S.O. #2 ENVIRONMENTAL STRATEGIC OBJECTIVE 2001-2005

Mid term review

Scope of work

1.) Strategic objective (SO) to be reviewed:

Management of Globally Important Ecoregions Improved.

The intermediate results which contribute to the SO are:

IR 2.1 Ecoregional management capacity of local NGOs strengthened.

IR 2.2 Policy, legal, and financial tools for improved ecoregional management developed.

2.) Background:

Paraguay contains portions of three critical ecoregions that are shared with its neighboring countries and all of which harbor globally important biodiversity: the Upper Parana Interior Atlantic rain forest, the Chaco tropical dry forest, and the Pantanal wetlands. All three ecoregions face serious environmental threats.

The Environmental SO #2 is part of the USAID/Paraguay Strategic Plan for FY 2001- 2005. This SO seeks to develop and implement Ecoregional and sub ecoregional management plans in a participatory manner and to coordinate conservation efforts with neighboring countries.

Ecoregional and sub ecoregional management plans should compile information on the status of the ecoregions, identify local and regional actions needed to improve its management and build support for its implementation.

Overall, Environmental SO # 2 seeks to support national, regional and global priorities. The national priority is focused on building the capacity of Paraguayan NGO's and CSO's in order for them to promote and achieve environmental initiatives. Also to assist the GOP and local governments in the development and implementation of environmental policies and legal tools that will improve management and conservation of the ecoregions. This SO encourages partners to identify alternative and sustainable sources of financing so that activities will continue after Mission support ends.

Paraguayan NGOs, CSOs, and departmental and municipal government leaders are the primary targets of the Mission's programming efforts. A Secondary target is the SEAM and related institutions such as the National Environmental Council and the Directorate of National Parks.

3) Purpose of Review:

The overall objective of this review is to assess the midterm progress achieved towards the Environmental Strategic Objective and offer concrete recommendations for future activist in the sector over the 2006-2011 period.

Specific objectives of this mid-term review are to:

A.) Based on the mid-term evaluations of the Environment SO activities, summarizes impact of the current program, lessons learned, and recommendations for adjusting the results, resources, activities and other parameters during the remainder of the life of the current SO.

B.) Provide recommendation regarding where the Mission should focus activities in this sector during the next Strategic Plan period. The recommendations should include ideas with regard to the following:

- Tie-In with Host-Country Development Priorities
- Paraguay's principle environmental problems and challenges in the medium term- 2006-2011.
- illustrative SO and critical assumptions
- the rationale for USAID's involvement (predominant capability/comparative advantage of USAID in the sector, etc.)
- some illustrative activities
- Relationship to other sectors and SOs in next Strategic Plan period
- Transition from current program

Basic questions to answer in order to do the above:

Where should the sector be in 2011?

What do you need to get there?

What obstacles exist to achieve this?

What exists already in order to help achieve where you want to get to in 2010?

What trends should you take into account?

What are achievements you would hope for?

4.) Review Methods:

The methodology to be used in this review should include:

A.) A review of the SO description, results and indicators, project documents, project papers and reports, and studies and research papers related to the SO. Review mid-term evaluations of DeSdel Chaco, TNC and WWF programs.

B.) Group and individual meetings and interviews conducted with key environmental sector experts, representatives of donor-funded environmental projects (USAID and other

donors), environmental NGOs, governmental officials at national, departmental and local. Representatives of the private sector with a vision of environmental issues should also be contacted.

5.) Team composition and Participation:

The review team will be composed of at least four members with language ability in Spanish:

2 Environmental specialists (from Washington)
Regional Environmental specialist (V.Bullen), and
Mission's environmental team representative.

Others to be involved on the process as a valuable source of information are:

Local national and international organizations implementing the SO
Local organizations working on issues related to the SO
Representatives from all levels of government

6.) Procedures: Schedule and Logistics:

a) Review existing documents:

- USAID Strategic Plan 2001-2005
- L.A. For the interior Atlantic Rainforest (WWF)& mid-term evaluation
- L.A. for the Chaco and Pantanal (TNC) & mid-term evaluation
- C.A. for the Chaco and Pantanal (DeSdel Chaco) & mid-term evaluation
- C.A for the Northern Block of and Legal Environmental Reform (IDEA), and
- Donors' environmental strategies and key program documentation including the WB's CAS, the IDB's new program strategy
- Additional reports as appropriate

Note: Two projects are managed by EGAT through the Leader Associates Award GCP I. Semi-annual reports and annual reports are available for these projects.

b) Individual and group interviews/meetings/teleconference

c) Presentation of the final reports

7.) Reporting and Dissemination Requirements:

The field work will begin on/about 2/9 and continue until on/about 2/25. Three reports will be required. The first is a 3-5 page summary of the conclusions and recommendations of the 3 mid-term evaluations (DesdeChaco, WWF, TNC) which were carried out previously. This will be for USAID/W reviewers and will capture progress, lessons, recommendations, mid-course corrections and implications beyond the current SP period.

The second is a 3-5 page summary of the findings, conclusions, recommendation for the existing program and recommendations for activities beginning in 2006 which will be submitted by 2/26 with a debrief on 2/27. This summary can largely serve as the executive summary of the final report.

The final report will be due on 3/12 and will include the following: The report will include an executive summary of no more than 2 pages, single spaced document containing a clear, concise summary of the most critical elements of the report. It should be self-contained document that can stand alone from the report. The summary should be written in such a way that that individuals unfamiliar with this environmental SO can understand its basic elements and how the finding from the evaluation are related to it without having to refer to any other document.

The body of the report should be no more than 15 pages and consist of the following sections (please see outline in section 3B):

- Table of contents,
- purpose of the review,
- findings on progress made of current SO, recommendations for future SO activities in the sector,
- discussion of what others donors are doing and planning in the sector (especially IDB, WB, WB/GEF, UNDP)
- discussion of most important cross-cutting issues to consider in a strategy to promote “sustainable development” such as forestry development and sustainable forestry management, sustainable agriculture, water resource and watershed management, decentralization and the role of local governments in promoting sustainable resource management.
- Recommend the methodology best suited for developing the Mission’s strategy in the environmental area- focus groups, key informants, type of analysis, illustrative kinds of technical expertise and associated SOW for development of the proposed concept into an SO.
- Appendices (list of institutions visited, persons interviewed, other significant issues, etc.)

1) The success of the Environment SO in the Chaco and Pantanal regions has been noteworthy where strengthening of the government and civil society are concerned. However, success on the overarching ecoregion conservation objective of the SO has been less significant due to inadequate attention to larger issues of deforestation, and long-term strengthening of Protected Area management (Defensores de Chaco) in the region.

2) DeSdel Chaco has made significant progress since its inception in 1995. DeSdel Chaco led the development of a 5-year conservation action plan for the Chaco and the Pantanal ecoregions. In the Defensores de Chaco, it is in the final stages of the process of transferring title of lands from IBR to SEAM. It is working to acquire Ramsar recognition of several wetlands areas in the Chaco, and has been instrumental in developing a consortium of private land owners and for developing management plans for Mennonite cooperative-owned areas in Río Yacaré Sur system. DeSdel Chaco has developed education programs on governance, organizational development, and environmental issues, and is actively working to strengthen local governments and municipal environmental secretariats (SEAMs) to proactively address regional environmental concerns.